

## CLAIMS

What is claimed is:

- 1 1. A method of automatically populating a contact database in a mobile communication device configured to communicate voice and data over a wireless network, the method comprising:
  - 4 receiving a telephone number associated with a voice call involving the mobile communication device; and
  - 6 when a data connection is established between the mobile communication device and a remote processing system via the wireless network, then
  - 8 automatically
  - 9 obtaining data associated with the telephone number via the wireless network, and
  - 11 storing the data in the contact database in association with the telephone number.
- 12

- 1 2. A method as recited in claim 1, wherein said receiving the telephone number comprises receiving Caller-ID information including the telephone number and associated with an incoming call to the mobile communication device.
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- 1 3. A method as recited in claim 1, wherein said receiving the telephone number comprises receiving a telephone number associated with an outgoing call being placed by a user of the mobile communication device.
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1    4. A method as recited in claim 1, further comprising attempting to locate the  
2    data associated with the telephone number in the contact database, wherein said  
3    obtaining data associated with the telephone number via the wireless network is  
4    performed only after failing to locate the in the contact database.

1    5. A method as recited in claim 1, wherein the mobile communication device  
2    comprises a browser to allow a user of the mobile communication device to  
3    navigate hypermedia information, and wherein said obtaining the data  
4    associated with the telephone number via the wireless network is done  
5    automatically by the browser.

1    6. A method as recited in claim 1, wherein said obtaining the data associated  
2    with the telephone number comprises automatically requesting the data  
3    associated with the telephone number from a remote server via the wireless  
4    network when the data connection is established.

1    7. A method as recited in claim 1, wherein the obtained data associated with the  
2    telephone number is contained in a vCard.

1    8. A method as recited in claim 1, wherein the obtained data associated with the  
2    telephone number comprises name or address information associated with the  
3    telephone number.

1       9. A method as recited in claim 1, wherein the obtained data associated with the  
2       telephone number comprises ring tone data for use to generate a ring tone  
3       indicating the incoming voice call.

1       10. A method of operating a browser in a mobile communication device  
2       configured to communicate voice and data over a wireless network, the browser  
3       to enable a user of the mobile communication device to access and navigate  
4       hypermedia data, the method comprising:

5                 receiving a telephone number at the browser in response to the mobile  
6       communication device receiving or initiating a voice call over the wireless  
7       network;

8                 in response to receiving the telephone number, automatically determining  
9       whether data of a predetermined type associated with the telephone number is  
10      stored in a contact database in the mobile communication device;

11                if the data associated with the telephone number is not stored in the  
12      contact database, then

13                waiting to establish a data connection with a remote server via the  
14      wireless network, and when the data connection is established,

15                automatically requesting the data associated with the telephone  
16      number from the remote server via the wireless network,

17                receiving the data associated with the telephone number via the  
18      wireless network, and

19                   storing the data associated with the telephone number in the  
20 contact database in association with the telephone number.

1     11. A method as recited in claim 10, wherein said receiving the telephone  
2     number comprises receiving Caller-ID information including the telephone  
3     number and associated with an incoming call to the mobile communication  
4     device.

1     12. A method as recited in claim 10, wherein said receiving the telephone  
2     number comprises receiving a telephone number associated with an outgoing  
3     call being placed by a user of the mobile communication device.

1     13. A method as recited in claim 10, wherein the received data associated with  
2     the telephone number is contained in a vCard.

1     14. A method as recited in claim 10, wherein the received data associated with  
2     the telephone number comprises name or address information associated with  
3     the telephone number.

1     15. A method as recited in claim 10, wherein the received data associated with  
2     the telephone number comprises ring tone data for use to generate a ring tone  
3     indicating the incoming voice call.

1       16. A machine-readable program storage medium storing instructions for  
2       execution in a mobile communication device configured to communicate voice  
3       and data over a wireless network, to cause the mobile communication device to  
4       execute a process of automatically populating a contact database in the mobile  
5       communication device, the process comprising:

6           receiving a telephone number associated with a voice call involving the  
7       mobile communication device; and

8           when a data connection is established between the mobile communication  
9       device and a remote processing system via the wireless network, then  
10      automatically

11           obtaining data associated with the telephone number via the  
12      wireless network, and

13           storing the data in the contact database in association with the  
14      telephone number.

1       17. A machine-readable program storage medium as recited in claim 16, wherein  
2       said receiving the telephone number comprises receiving Caller-ID information  
3       including the telephone number and associated with an incoming call to the  
4       mobile communication device.

1       18. A machine-readable program storage medium as recited in claim 16, wherein  
2       said receiving the telephone number comprises receiving a telephone number

3 associated with an outgoing call being placed by a user of the mobile  
4 communication device.

1 19. A machine-readable program storage medium as recited in claim 16, wherein  
2 the process further comprises attempting to locate the data associated with the  
3 telephone number in the contact database, wherein said obtaining data  
4 associated with the telephone number via the wireless network is performed  
5 only after failing to locate the in the contact database.

1 20. A machine-readable program storage medium as recited in claim 16, wherein  
2 the instructions are part of a browser to allow a user of the mobile  
3 communication device to navigate hypermedia information, and wherein said  
4 obtaining the data associated with the telephone number via the wireless  
5 network is done automatically by the browser.

1 21. A machine-readable program storage medium as recited in claim 16, wherein  
2 said obtaining the data associated with the telephone number comprises  
3 automatically requesting the data associated with the telephone number from a  
4 remote server via the wireless network when the data connection is established.

1 22. A machine-readable program storage medium as recited in claim 16, wherein  
2 the obtained data associated with the telephone number is contained in a vCard.

1    23. A machine-readable program storage medium as recited in claim 16, wherein  
2    the obtained data associated with the telephone number comprises name or  
3    address information associated with the telephone number.

1    24. A machine-readable program storage medium as recited in claim 16, wherein  
2    the obtained data associated with the telephone number comprises ring tone data  
3    for use to generate a ring tone indicating the incoming voice call.

1    25. A mobile communication device comprising:

2                 a telephony unit to communicate voice over a wireless network; and  
3                 a browser to allow a user of the mobile communication device to browse  
4                 hypermedia information via the wireless network, the browser providing a  
5                 process of automatically populating a contact database in the mobile  
6                 communication device, the process comprising:

7                         receiving from the telephony unit a telephone number associated  
8                 with a voice call involving the mobile communication device, and

9                         when a data connection is established between the mobile  
10          communication device and a remote processing system via the wireless network,  
11          then automatically

12                         obtaining data associated with the telephone number via the  
13          wireless network, and

14                         storing the data in the contact database in association with  
15          the telephone number.

1    26. A mobile communication device as recited in claim 25, wherein said  
2 receiving from the telephony unit the telephone number comprises receiving  
3 Caller-ID information including the telephone number and associated with an  
4 incoming call to the mobile communication device.

1    27. A mobile communication device as recited in claim 25, wherein said  
2 receiving the telephone number comprises receiving from the telephony unit a  
3 telephone number associated with an outgoing call being placed by a user of the  
4 mobile communication device.

1    28. A mobile communication device as recited in claim 25, wherein the process  
2 further comprises attempting to locate the data associated with the telephone  
3 number in the contact database, wherein said obtaining data associated with the  
4 telephone number via the wireless network is performed only after failing to  
5 locate the in the contact database.

1    29. A mobile communication device as recited in claim 25, wherein the  
2 instructions are part of a browser to allow a user of the mobile communication  
3 device to navigate hypermedia information, and wherein said obtaining the data  
4 associated with the telephone number via the wireless network is done  
5 automatically by the browser.

1    30. A mobile communication device as recited in claim 25, wherein said  
2    obtaining the data associated with the telephone number comprises  
3    automatically requesting the data associated with the telephone number from a  
4    remote server via the wireless network when the data connection is established.

1    31. A mobile communication device as recited in claim 25, wherein the obtained  
2    data associated with the telephone number is contained in a vCard.

1    32. A mobile communication device as recited in claim 25, wherein the obtained  
2    data associated with the telephone number comprises name or address  
3    information associated with the telephone number.

1    33. A mobile communication device as recited in claim 25, wherein the obtained  
2    data associated with the telephone number comprises ring tone data for use to  
3    generate a ring tone indicating the incoming voice call.